In the Claims

Claims 1-12 (cancelled)

13. (Currently Amended) A therapeutic compound of the formula: X-Y-Z, wherein X is a therapeutic entity, Y is an *in vivo* cleavable linking entity covalently connecting said therapeutic entity to Z, and Z is a chemically reactive group for reacting *in vivo* with a reactive functionality on an endogenous vascular or blood component protein so as to form a covalent bond therewith, wherein said reactive functionality is selected from the group consisting of amino, carboxylate, and thiol reactive functionalities, said ~~therapeutic agent~~ chemically reactive group thereby covalently linking *in vivo* said therapeutic entity to said protein through formation of said covalent bond and whereby said linking entity is cleaved after covalent linking of the therapeutic entity to the protein, thereby releasing the therapeutic entity.

14. (Previously Added) A therapeutic compound according to claim 13, wherein said therapeutic entity is a synthetic organic drug.

15. (Previously Added) A therapeutic compound according to claim 13, wherein said therapeutic entity is a peptide.

16. (Previously Added) A therapeutic compound according to claim 13, wherein said linking entity has from 2-30 atoms in a backbone chain.

17. (Currently amended) A therapeutic compound according to claim 13, wherein said linking entity ~~comprises~~ is selected from the group consisting of an oligopeptide~~;~~, an oligonucleotide~~;~~, a disulfide~~;~~, an organic divalent group which can be aliphatic, aromatic, alicyclic, heterocyclic or combinations thereof.

18. (Previously Added) A therapeutic compound according to claim 13, wherein said chemically reactive group is selected from the group consisting of N-hydroxysuccinimide, carbodiimide anhydride, and N-hydroxysulfosuccinimide.

19. (Previously Added) A therapeutic compound according to claim 13, wherein said chemically reactive group is N-hydroxysuccinimide.

20. (Previously Added) A therapeutic compound according to claim 13, wherein said chemically reactive group comprises maleimide and said reactive functionality is a thiol group.

21. (Previously Added) A therapeutic compound according to claim 13, wherein said endogenous vascular or blood component protein is long-lived.

22. (Previously Added) A therapeutic compound according to claim 21, wherein said endogenous vascular or blood component protein comprises serum albumin.

23. (Previously Added) A therapeutic compound according to claim 13, wherein said therapeutic compound comprises a chemotherapeutic agent, an antibiotic, an antihypertensive agent, an anti-coagulant, an analgesic, a hormone, an immunosuppressive or immunoregulatory agent, an enzyme, a vasoactive drug, an anti-inflammatory drug, an anti-histamine, a cardiovascular drug or an anti-proliferative drug.

24. (Previously Added) A pharmaceutical composition comprising a therapeutic compound according to claim 13 and a physiologically acceptable medium.

25. (Previously Added) A pharmaceutical composition according to claim 24, wherein said physiologically acceptable medium comprises one or more of the following: saline, aqueous glucose, alcohol, deionized water, and phosphate buffered saline, dimethylsulfoxide, and vegetable oil.

26. (Currently Amended) A composition consisting essentially of a compound formulated in a physiologically acceptable medium, said compound comprising a therapeutic entity, an *in vivo* cleavable linking entity covalently connecting said therapeutic entity to a chemically reactive group, said chemically reactive group being complementary in reactivity to a reactive functionality of an endogenous blood or vascular system protein of a patient, said reactive functionality being selected from the group consisting of amino, carboxylate, and thiol reactive functionalities; wherein said chemically reactive group reacts *in vivo* with said reactive functionality to form a covalent bond therewith and whereby said compound covalently links *in vivo* said therapeutic entity to said protein ~~through formation of said covalent bond~~.

27. (Previously Added) A composition according to claim 26, wherein said therapeutic entity is a synthetic organic drug.

28. (Previously Added) A composition according to claim 26, wherein said therapeutic entity is a peptide.

29. (Previously Added) A composition according to claim 26, wherein said chemically reactive group is N-hydroxysuccinimide.

30. (Previously Added) A composition according to claim 26, wherein said chemically reactive group comprises maleimide.

31. (Previously Added) A composition according to claim 26, wherein said therapeutic entity is a synthetic organic drug; said linking entity is from 6 to 15 atoms in length between said therapeutic entity and said chemically reactive group; and said chemically reactive group is N-hydroxysuccinimide, N-hydroxysulfosuccinimide or maleimide.

32. (Previously Added) A composition according to claim 26, wherein said therapeutic entity is a synthetic peptide; said linking entity is from 6 to 15 atoms in length between said therapeutic entity and said chemically reactive group; and said chemically reactive group is N-hydroxysuccinimide, N-hydroxysulfosuccinimide, or maleimide.

33. (Previously Added) A method of providing a therapeutic activity to a patient, said method comprising administering to said patient in a therapeutically effective amount a composition according to claim 26.

34. (New) A therapeutic compound according to claim 13,

wherein said therapeutic entity is an antiproliferative drug,

wherein said cleavable linking entity Y includes about 24 atoms in the chain, wherein each of said atoms is independently selected from the group consisting of oxygen, nitrogen, and carbon atoms, and

wherein said chemically reactive group Z is maleimide.